U.S. Department of Commerce
National Institute of Standards and Technology
Gaithersburg, MD 20899-2350

Certificate Number: 91-041A2

National Type Evaluation Program

Certificate of Conformance

for Weighing and Measuring Devices

For:

Vehicle/Railway Track Scale
Modular Load Cell Electronic
Models: RSC and RSCA Series
n_{max}: 10 000; e_{min}: 20 lb
Capacity: See Below
Platform: See Below
CLC: 40 ton* Section Capacity: 85 to 180 ton*

Accuracy Class: III/III L

Submitted by:

Cardinal Scale Manufacturing Co.
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Standard Features and Options

Capacities from 100 000 to 540 000 lb

Platform lengths from 12' to 105'

Platform widths from 10' to 12'

Span lengths up to 28.5'

Load Cells: Revere Transducers CSP Series, 200k (Certificate of Conformance Number 88-082A4), or
Cardinal Scale Manufacturing SCA Series, 100k or 120k (Certificate of Conformance Number 89-042A3)

* Combination vehicle/railway track scale installations must satisfy the relationship of: Nominal capacity $\leq$ CLC (N - 0.5) where N is the number of sections and $v_{min} \leq d/\sqrt{N}$, where N = number of load cells.

Combination vehicle/railway track scales must be marked with both the CLC and section capacity. The CLC and its related formula is applicable to the vehicle scale capacity which may be different than the railway scale capacity. When these capacities are different each capacity must be marked on the device. The section capacity must be marked for the railway scale.

Temperature Range: -10 °C to 40 °C (14 °F to 104 °F)

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Effective Date: August 24, 1999

Gilbert M. Ugiansky, Ph.D.
Chief, Office of Weights and Measures
Issue Date: October 27, 1999

Cardinal Scale Manufacturing Co.
Vehicle/Railway Track Scale
Models: RSC and RSCA Series

Application: For general purpose weighing of vehicles and railroad cars.

Identification: The identification badge is located in the pit at the point where the cable that is connected to the indicating element leaves the load receiving element.

Sealing: The load cell junction box can be sealed with a wire or pressure sensitive security seal for individual load cell or section adjustments. The overall scale calibration can be sealed according to the sealing provisions on the indicating element.

Test Conditions: This Certificate supersedes Certificate of Conformance Number 91-041A1 and is issued to add the notation for platform width. Previous test conditions are repeated below for reference.

Certificate of Conformance Number 91-041A1: This Certificate superseded Certificate of Conformance Number 91-041PN and was issued to upgrade the Certificate from Pre-NTEP to a full certificate and to include additional model capacities and sizes. The emphasis of this evaluation was on device design and performance. The Model 7080-RSCA, 70' x 10' (comprised of 2 35' x 10' sections) combination vehicle/railway track scale was tested as a vehicle scale with a capacity of 200 000 x 20 lb and a railway track scale with a capacity of 400 000 lb x 50 lb. The scale was tested initially with test weights of 100 000 lb and a test load of 212 750 lb and 44 days later with 100 000 lb of test weights and a test load of 238 500 lb.

The results of these evaluations indicate that the device complies with the applicable requirements of NIST Handbook 44.

Type Evaluation Criteria Used: NIST Handbook 44, 1999 Edition

Tested By: J. Decker (GIPSA), D. Wallace, D. Jones, L. Scolfield (Colorado)

Information Reviewed By: G. Newrock (NIST), R. Suiter (NIST)